

Ozone Therapy – Breaking Down the Science, Benefits, and Facts



by Micah Lowe

What You'll Learn

With a deep history and scientific validation, why is ozone therapy not used more?

- How safe ozone is (hint: has a better safety record than aspirin)
- Why ozone therapy works, on a biochemical level
- Is ozone therapy right for you?

What is it like to be failed by the medical system?

More and more people understand what it's like to be failed by conventional medicine. In 2017, the United States spent 17% of its GDP on healthcare to produce one of the lowest-performing systems in treating chronic disease. An unsustainable track.

Most folks just want a normal life with non-toxic and effective medicine but don't know how to get there.

All the compiling issues make people feel trapped and lost. It's normal to feel lost in the midst of sickness, not knowing where to turn because of the overwhelming amount of information and choices. Some even get to the point where they feel no hope.

People shouldn't be failed by the medical system. They deserve to get results after all the time, money, and energy invested. Sorting through all the information shouldn't be so difficult, there should be an answer.

I understand what it's like to feel trapped in the medical system, doubting the very people who should have an answer. The lack of results and clarity is frustrating.

Although I don't promise to alleviate all those problems, I want to provide one piece of the puzzle and a step in the right direction – an informed decision about ozone therapy.

Ozone therapy is growing in popularity and potentially beneficial for a variety of ailments due to its proposed ability to rebalance complex systems in the body, namely metabolic efficiency and immune balancing.

Background of Ozone Therapy

Ozone Gas

Ozone is a gas and is composed of three oxygen atoms (O₃), a close relationship to oxygen (O₂). Different from oxygen, ozone is extremely unstable because that extra oxygen atom wants to break off and combine with other molecules, known as oxidation.

Many know about ozone due to pollution, industrial applications, or the ozone layer. Ozone therapy is different from these topics and entails the safe administration of a pure ozone-oxygen mixture of gas.

History

Ozone has a medical history dating back to 1871. In WWI, ozone was used to save the lives of soldiers by eliminating potentially fatal infections from wounds. The scientific basis of ozone therapy accelerated in the 1960's, namely by scientists Dr. Velio Bocci (Italy) and Dr. Hansler (Germany).

In the past twenty years, ozone therapy has started to make serious scientific leaps with an increasing amount of data and scientists involved in its study. Today, over 50,000 practitioners around the world practice ozone therapy on a daily basis.

Safety

While ozone is harmful to the lungs, scientists have been finding ozone therapy can be safely administered to other parts of the body, such as blood or the colon. (1)

Breathing ozone is not safe because it will irritate the lungs. There is no antioxidant system in the lungs, which make them vulnerable to oxidants like ozone. (2)

Ozone can be safely applied in other parts of the body because they have an antioxidant system. This system, found in most parts of the body, defends against the potential for ozone to cause harm.

According to data by the International Scientific Committee of Ozone Therapy, only 6 out of 100,000 ozone therapy sessions have a negative side effect, **a higher safety record than aspirin.** This organization attributes most of the negative side effects to misuse by the practitioner and improper protocols.

How Ozone Therapy is Applied

There are many different protocols and nuances to how ozone can be done, which brings a variety of administration methods to the table. Ozone therapy is primarily administered either by mixing blood with ozone or pushing ozone into a body cavity, such as the ears, vagina, or colon.

Ozone is also commonly used in other medical professions, such as dentistry to eradicate infections or by pain doctors who treat injuries and pain, such as slipped discs, torn ligaments, and arthritis.

However, these purposes are applied in a different way and have different benefits than outlined in this article.

The two most beneficial and common forms of ozone therapy are Major Autohemotherapy and Rectal Insufflation.

Major Autohemotherapy is a 30 minute procedure done at a doctor's office, involving a withdrawal of blood, mixing it with ozone, and administering the blood back into the vein.

Rectal insufflation is an easy, five-minute therapy, often done from home and is similar to an enema. It involves capturing a small amount of ozone into a bag and insufflating (pushing) the gas three inches into the rectum, holding for 30 seconds, and discharging if needed.

Physiology: How and Why Ozone Therapy Works

How Ozone Therapy Works

When a person takes a drug, it will turn a system off or on. This forces the body to make a certain reaction.

Ozone is different from the drug approach. Rather than forcing the body to take action, it helps the body to rebalance and perform as it should, without the need to turn things on and off. This is commonly called self-regulation or homeostasis.

Similar to an alarm clock waking you up in the morning, ozone therapy stimulates biological systems to get up and get moving on their own.

Why Ozone Therapy Works

The actions of ozone therapy are numerous, but can be summed up in the following:

- Increases antioxidants in the body and mediates oxidative stress. Oxidative stress is a leading cause of aging, inflammation, and disease. Ozone therapy has the unique ability to mediate oxidative stress and subsequent damage, which is interesting considering ozone is an oxidant itself. (3)
- Activates the Nrf2 Pathway. Ozone therapy creates a mild, acute oxidative stress and activates the NRF2 pathway **(the same pathway activated during exercise and fasting)**. 4, 5, 6
- Increases 2,3-Diphosphoglycerate (2,3-DPG). This molecule is stimulated as a result of an improved glycolytic rate from ozone therapy and helps to release more oxygen to the cells. (7)
- Increases adenosine triphosphate (ATP). ATP is the energy source of the body. More ATP = more brain power, less sickness, more strength, and more energy. (7)

Benefits of Ozone Therapy

As a result of how ozone therapy works, the body increases in metabolic efficiency, blood flow, and immune balancing.

To some, this is a tremendous biohack, and to others it is a great way to fight Lyme, cancer, or auto-immune disease.

Ozone therapy is commonly used for:

- Primary care physicians, chronic diseases: cancer, lyme, autoimmune, infectious diseases, viruses, etc.
- Podiatrists, skincare, dermatology, wound care: Non-healing wounds, ulcers, sores, rashes, etc.
- Athletic enhancement, cyclists, triathletes, NFL: Improves performance and recovery
- Anti-aging/longevity: Mediates oxidative stress, a leading cause of aging.

People commonly experience these positive side effects after doing ozone therapy:

- Increased energy and stamina
- Improved cognitive function and decreased brain fog
- Sense of well-being
- Decreased pain and inflammation

Metabolic Efficiency

According to leading scientists, such as Dr. Bocci and Shallenberger, ozone therapy is able to enhance metabolic efficiency, and more specifically oxygen efficiency. (8, 9, 10, 11, 12, 13)

Oxygen_efficiency is our body's ability to use oxygen for metabolism, a necessary process for creating energy, repairing the body, and eliminating waste; maintaining life. (14) As you breath oxygen in, your body uses it to create energy. A person who is highly oxygen efficient will have more energy, live longer, and diminish likelihood of disease.

Just adding more oxygen into the system doesn't help improve oxygen efficiency. While being saturated with oxygen is a good thing, it's equally important to utilize the oxygen well, which is where ozone therapy steps in.

In a publicly available lecture, Dr. Frank Shallenberger explained how oxygen efficiency deteriorates as we age, make poor health decisions, and become sick. **However, with ozone therapy there is a clear improvement of oxygen efficiency and ATP generation (the molecule responsible for energy).** (15) Which is why Dr. Shallenberger and a large base of scientists (ISCO3, WFOT, and AAOT) believe ozone therapy is a medicine of the future.

Blood Flow Improvement

Ozone therapy is claimed to improve rheology of the blood (blood flow), an important aspect of bringing nutritional elements to our cells, and eliminating byproducts. (16, 17, 18) Proper blood flow sets the foundation for the body to repair itself. (19)

Blood should freely flow and avoid clotting into clumps. Imagine the difference between water and molasses. Water is quick, fluid, and moldable, but molasses is slow, thick, and sticky. Sometimes our blood can become thick, slow, and sticky instead of quick.

Poor blood flow is fairly common and contributes to:

- Inflammation
- Circulatory Issues
- Malnourishment to organs and tissues
- Diminished energy
- Chronic disease

Dr. Bocci remarks on ozone's ability to improve blood flow when he says,

"ozone therapy can produce a significant improvement in blood flow and oxygenation in ischaemic tissues: it appears that the more poorly oxygenated muscles benefited most from the therapy even though this result had been achieved after only two ... ozonated AHT." (20)

As said above, ozone therapy increases oxygenation because it improves blood flow.

Furthermore, it's not necessary to do ozone blood treatments. Improving blood flow can be done with simple at home measures, such as rectal insufflation. (21)

When our blood is flowing well, we are setting up the foundation of healing and optimization. The blood brings nutrients to tissues and takes away any waste or unneeded molecules.

Immune Balancing

A healthy immune system is better than any drug. Helping our immune system to perform optimally is the best route to fighting disease and optimizing performance.

Ozone therapy modulates and balances the immune system which is different from boosting the immune system.

Boosting the immune system is one-dimensional. Immune balancing is a multi-dimensional approach and can either boost or calm down the immune system (homeostasis).

Not everyone wants to boost the immune system. For instance, auto-immune disorders are the result of the immune system attacking the body. You wouldn't want to encourage this action.

On the other side, people often want to boost the immune system to fight diseases and ward off infections. Many people are immune suppressed from drugs, steroids, treatments, and infections.

Ozone takes a holistic approach and allows the body to balance its own immune system, a form of auto correction. It merely stimulates the immune system to take the appropriate reaction, either enhancing or diminishing its response. (22, 23, 24, 25)

Dr. Robert Rowen demonstrated an impressive case study on a severe autoimmune disease, dermatomyositis. His own immune system was attacking his body, so doctors put him on high doses of steroids to suppress the immune system, but it didn't help. By removing an oral infection and regular ozone therapy, Dr. Rowen claimed to reverse the symptoms and bring the immune system into balance (pictured below). (26)

In addition to this case study, Dr. Rowen posted 23 video logs documenting success with ozone therapy for autoimmune issues. (27)

Uses: Diseases Treated and Other Purposes

Ozone therapy is used for many diseases, injuries, and conditions. It is typically used in conjunction with other treatments and is rarely administered as the only treatment for a disease. Additionally, it is commonly synergistic with many therapies, even invasive measures such as chemotherapy.

Dr. Rowen is known for saying, *"Ozone treats many things but cures nothing."*

Beyond topical skin and oral infections, ozone therapy is not a miracle cure or a silver bullet, but it is definitely a good tool to have available.

Again, we are stimulating the body to perform better, which in turn helps heal and optimize. This is why it can work with a multitude of conditions and purposes.

The list of diseases treated is large, but has been condensed into the most common here:

- Cancer
- Autoimmune Disease
- Lyme Disease
- Infections
- Rheumatoid Arthritis
- Chronic Fatigue
- Chronic Pain
- Ear Infections
- Heart Disease
- Allergies and Sinusitis
- Dental Cavitations and Infections
- Alzheimers

Use in Athletics

Cristiano Ronaldo (superstar soccer player) and Adrian Peterson (superstar football player) have openly used ozone therapy to improve their athletic performance.

Ozone therapy has been shown to improve oxygen metabolism and reduce muscular fatigue (28), which is why it is used in most professional sports including the NFL, MLB, and UFC.

Preventative Care and Biohacking

Ozone therapy is commonly used as a biohack and method to improve quality of life. This is a great way to increase energy, help the immune system, and mediate the negative effects of aging.

Is Ozone Therapy for You?

That's something we cannot answer for you. We recommend speaking with a doctor. You can find a list of ozone doctors here: map.drsozone.com. Innovative Medicine also offers ozone therapy at their clinic, the [New York Center for Innovative Medicine](#), as part of a comprehensive suite of therapies

If you want to get started with ozone therapy at home, you can [access the guide to getting started by clicking here](#).

This overview of ozone therapy's background, physiology, benefits, and uses will allow you to make a more informed decision about this natural therapy, exploding in popularity.

Is ozone therapy a medicine of the future? Time will tell. But it certainly is helping a lot of people feel better and has a strong scientific backing of safety and effectiveness.